**K-5 Math Lesson Plan**

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| **Teacher:** Paul Travers/Alex Peabody | | | **Grade: 5** | | | **Date(s)**: Task 1 Day 4 |
| **Unit Title:**  Unit 1 - Understand the Decimal Place Value System | | | | **Corresponding Unit Task:**  2012 Summer Olympics – Comparing Decimals | | |
| **Essential Question(s):**  How does a digit’s position affect its value?  How many different ways can you write a number? | | | | | | |
| **Materials/Resources** | | | | **Essential Vocabulary** | | |
| **Teacher:**  Whiteboard, marker, eraser, base-ten blocks | | **Student:**  “2012 Summer Olympics” article excerpt, pencil, index cards, chart paper, markers, highlighters | | | **tenths hundredths**  **thousandths expanded form**  **base-ten numeral place value**  **number name pattern**  **multiply divide**  **greater than (>) less than (<)**  **equal to (=) round**  **compare/comparison**  **decimal/decimal point** | |
| **Learning Experience** | | | | | | |
| **8 Mathematical Practices:**  1. Make sense of problems and persevere in solving them.  2. Reason abstractly and quantitatively.  3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics.  5. Use appropriate tools strategically.  6. Attend to precision.  7. Look for and make use of structure.  8. Look for and express regularity in repeated reasoning. | **Common Core State Standards:**  **5.NBT.3b**  **Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.**  **(Correlates to NCSCOS Math Objective 1.01)**  **5.NBT.3a**  **Read and write decimal numbers to thousandths using base-ten, number name, expanded form.**  **(Correlates to NCSCOS Math Objective 1.01)** | | | | | |
| **I Can Statement(s):**  I can compare two numbers to the thousandths using >,<,=.  I can compare decimal place value to the thousandths.  I can classify numbers based on their place value. | | | | | |
| **Activating Strategy/Hook:**  Place the students in groups of 2 or 3 and distribute the article, “NASCAR Race.” *(see below lesson plan)* Have the groups read the article together. One student should highlight the numbers that they see in the article, while another member writes each highlighted number on separate index cards.  Ask half of the groups to classify the numbers into two or more piles creating at least two categories with an observable attribute. Have the students take their classifications and share them with the class by displaying them on a wall or on a piece of chart paper.  Ask the other half of the groups to order their numbers in ascending or descending order. | | | | | |
| **Teacher Directed:**  Have the students take a gallery walk examining the other groups’ work. After the gallery, walk pose these questions: 1) What do the numbers in each group have in common? 2) Why did you classify the numbers the way you did? 3) Were there any responses from the other groups that surprised you? | | | | | |
| **Guided Practice:**  The teacher will work with a small group of students who struggled with Task 1 while other students are working on the independent practice. | | | | | |
| **Independent Practice: choice of A or B activity (teacher select based on understanding exhibited during activator and teacher directed).**  **A**  Students will work independently and read the article excerpt, “2012 Summer Olympics” *(see below lesson plan)* Have the student read the article and highlight the numbers; then write each highlighted number on separate index cards.  • Have them classify the numbers into two or more piles creating at least two categories with an observable attribute.  • Have the students take their classifications and display on a piece of construction paper. Each student will write an explanation of their classification.  **B** Students will work with a partner to play a decimal creation game:  Goal: Create the largest decimal number   * Students will roll a die * Student will assign the number to a place on their place value chart. * Once all of the place values have filled up, the students will determine who has the largest/smallest number * Students will rotate rolling the die (each student gets 4 turns) * After five number creations, students will individually order their numbers from least to greatest.   The student with assign a comparison symbol (>,<,=) | | | | | |
| **Closing/Summarizing Strategy:**  Journal: Students describe various methods that can be used to compare numbers. | | | | | |
| **Differentiation Strategies** | | | | | | |
| **Extension** | | | **Intervention** | | | **Language Development** |
| Write their own imaginative story about an Olympic event that involves the use of decimals. | | | Work with numbers representations through base-ten blocks to reinforce place value meaning for comparison purposes. | | | Work with numbers representations through vocabulary (both oral and written) to reinforce place value meaning for comparison purposes. |
| **Assessment(s):**  Journal | | | | | | |
| **Teacher Reflection:** (Next steps?)  Students understandings/misconceptions  Specific notes about students’ thinking  What do I need to reteach/review tomorrow or in future?  New ideas or changes for next time? | | | | | | |

**NASCAR Race**

The race on Sunday brought out some competitive racers. The heights of the racers were as different as the racing styles of the men themselves: Billy Johnson (68.2 inches), Mike McCormick (64.9 inches), Tony Smith (73.54 inches), and Bob McGovern (71.0 inches). The cars they each used were very similar in length, with Mike’s being the longest and Bob’s being the shortest and Billy’s just a fraction behind Mike’s in length. The lengths of the cars were 4.02, 4.24, 4.20, and 4.1 meters.

The race was exciting and long, with many lead changes throughout the grueling afternoon. Tony was able to keep his car in line the best and drafted past Bob in the final moments of the race to record a finish time of 3.025 hours. That left Bob in second place with a time of 3.034 hours. Moments later Mike sped across the line at 3.067 hours. Suffering from an extra pit stop due to worn tires, Billy Johnson ended the race at 3.269 hours.

**2012 Summer Olympics**

**Archery**

(Venue: Lord’s Cricket Ground, London)

Bows and arrows were first used for hunting and warfare about 10,000 years ago. Archery—using a bow to shoot an arrow as close to a target as possible—developed as a competitive activity in medieval England. Today, it is practiced in more than 140 countries.

Archery was featured in the 1900 Olympics in Paris. It was dropped after 1908, returned in 1920, then was dropped again. It was reintroduced in 1972 at the Olympics in Munich, Germany, and has been part of the games since then.

Men and women compete individually, shooting from a distance of 70 meters (229.702 feet). The targets have a diameter of 122 centimeters (48.0 inches), with a 12.2-centimeter (4.8-inch) gold ring in the center.

**Athletics**

(Venues: Olympic Stadium and The Mall, London)

Athletic contests in running, walking, throwing, and jumping are some of the world’s oldest sports. Ancient Egyptian tombs depict athletic events as early as 2250 BCE. The very first Olympic Games featured a sprint of approximately 192 meters (629.9 feet). Athletics have been a major part of every Olympics since.

Today, four areas make up the athletics competition. Track events are footraces ranging from 100 to 10,000 meters (109.4 yards to 6.2 miles). Field events feature throwing and jumping, and include shot put and long jump. Combined events involve running, jumping, and throwing, and include the decathlon. Road events include marathons and race walks. Athletes compete as individuals and teams, called relays.

Athletics will be the largest sport in the 2012 Olympics, with 2,000 athletes competing in 47 events.